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AUTHOR Barnes, Delores
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ABSTRACT

This study was conducted to identify the language difficulties encountered by parents in working with 106 goal statements for elementary education. A sample of 13 parents from middle to low socioeconomic classes identified 1,265 words and phrases they did not understand. After the goals were rewritten, parents identified only 58 words and phrases as not understandable. Based on the theory that communication only takes place when communicators are speaking from a mutually held stock of knowledge, the newly rewritten statements are more understandable than the original statements. Based on the theory of pragmatic communication, the parents are still in a doublebind position regarding such goals as those of modern math and cannot communicate appropriately their desires for their children. Should principals act on the rating of such goals by parents, it is possible that the school programs would not reflect the true goals desired by parents. If parents are to participate in goal-sorting procedures, they need a way of indicating what they do not understand and an opportunity for further clarification prior to rating the goals. (Author/DN)

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STRUCTURING COMMUNICATION WITH PARENTS: PARTICIPATION IN COMMON TERMS

Delores Barnes

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EA 004 770

The CSE Elementary School Evaluation KIT: Needs Assessment

The Center for the Study of Evaluation, in its efforts to provide tools for evaluation, has developed an Elementary School Evaluation KIT: Needs Assessment (Hoepfner, et al., 1973). Using the KIT, a school principal can conduct an assessment of his school's needs by identifying desirable program goals for the children, determining the school's current success in meeting those goals, and determining the utility of increased emphasis on the desired goals. After the Needs Assessment is completed and the current program is evaluated in terms of the stated goals, program changes may be made to try to meet the goals.

One of the initial steps in the identification of a school's goals includes the participation of teachers, parents, and others in a procedure called the "Collective Viewpoints" goal sort. The Center prepared a comprehensive set of 106 curriculum goals for children in the elementary schools. The goal statements were developed at a level of generality permitting exhaustion of the range of elementary education goals, that is, above that of behavioral objectives or curriculum objectives, but below the level of those adopted at state or federal levels as the "Ten Glittering Goals of Education" (Hoepfner, 1972).

Teachers, principals, superintendents, and curriculum specialists were interviewed and intensive searches were made of both curriculum literature and instructional materials. From this data, descriptors for each goal statement were developed by classfying the operational and behavioral objective statements into their respective meaningful units. Each descriptor and goal name was printed on a Q-sort card for a total of 106 cards.

Participants in a Collective Viewpoints card sort are asked to sort the goals into five stacks, marked "5. Most Important," "4. Moderate Importance," "3. Average Importance," "2. Marginal Importance," and "1. Unimportant, Irrelevant." After the cards are sorted into the five stacks by each parent or teacher, the ratings are tallied and combined together to form a ranking or priority list of goals as perceived by the constituents of that school. The procedure was developed to ensure input by teachers and parents in the setting of goals for the schools in which they or their children are engaged.

Following the card sort, the KIT instructs the principal in setting up a testing program to identify the areas for further concern in relation to the stated goals. He selects the highest priority goals from the list and tests the children in those goals to determine whether the current curriculum is achieving goals desired by the particular school. If, for example, the children appear to be achieving the goals with the current curriculum, no change of program would be indicated. However, if their test scores indicate that they are not achieving the stated goals, the principal and others would wish to develop a new program plan in the area of low achievement, to attempt to meet the already established highest priority goals.

This procedure for Needs Assessment is based on the assumption that the goal priorities obtained in this manner are both valid and cogent statements made by teachers and parents about what they want children to know and do, in their school.

The KIT was field tested nationally during 1971 with a sample of about 200 schools, about 100 from selected areas of the country and about 100

schools in California. It was also monitored in a case study manner in two local schools near Los Angeles. The results of the entire field test can be read in Report on the Field Testing of Elementary School Evaluation KIT: Need Assessment (Hoepfner, et al., 1971).

The field test results indicated, among other findings, that parents found the vocabulary in the card sort somewhat-to-very difficult to understand (see pp. 2, 34, 79, 88, 89, 94). The results did not, however, provide data on the kinds of difficulty the vocabulary presented to parents. The report recommended further research in an attempt to identify the types and possible ranges of difficulty encountered by parents, with the focus on different economic (and presumably educational) levels, to try to flush out the vocabulary and/or conceptual problems. (See page 2 of Hoepfner, et al., 1971.)

Communication Problems in Education

Two theories related to communication were examined as possible tools in the analysis of the problems encountered by the parents. The first is a theory about the origin of knowledge and how it is exchanged in society. The other is a theory relating to communication disorders, and how they are perpetuated in exchanges of knowledge between two or more persons. The first approaches knowledge and communication from a sociological perspective, with the focus on society as a whole; while the second approaches communication from a psychological point of view, and focuses upon interactions between two or more persons.

The sociological approach utilizes the concepts developed by Berger and Luchmann in The Social Construction of Reality (1966), that all knowledge

is knowledge from a particular position, and that communication takes place where there is common agreement on the existence of an idea and language to express it. It may be that the formulators of the information on the cards were using ideas and language which do not exist or at least have different meanings in the minds of parents and others who participated in the goal sort.

Berger and Luchmann hold that there is a universe of knowledge in which members of society participate differentially. The whole society participates to some degree in a common stock of knowledge with language shared by all; each member of society participates to some degree in a variety of "sub-universes" of knowledge, which have particular language to describe or explain them. The less a member of society knows about a particular "sub-universe" of knowledge and language the less communication takes place in that area. This lead to the possible situation that parents, not being participants in the sub-universe of knowledge called "education," would not understand the language of education and therefore could not select educational goals for children unless they were written in the language of the "common stock of knowledge."

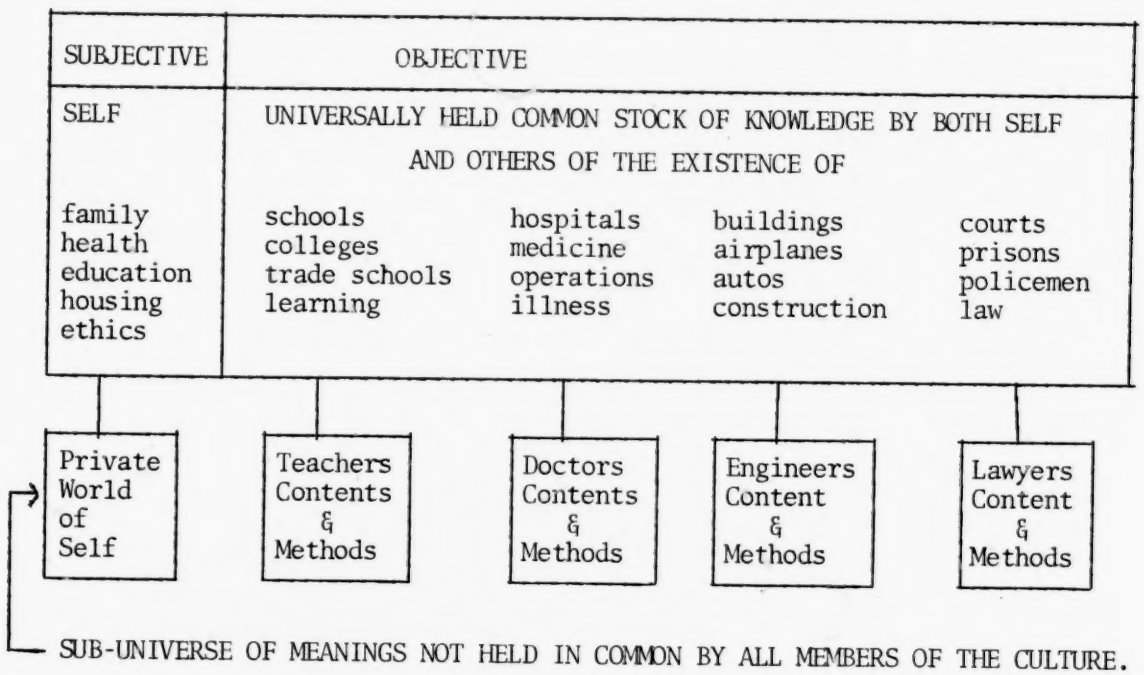
The individual in our society has personal knowledge about his private life as experienced by him, such as family, his personal health, education, residence in a neighborhood. He also experiences an ethical milieu as provided in his family. This type of knowledge is subjectively experienced by each individual.

He also has some knowledge, along with other individuals, that in his society there are institutions, ethical systems of thought, and divisions of labor. This knowledge is shared and experienced objectively among the

members of society. Knowing that almost all persons experience family or family substitute, good and bad health, attend school, live in a house or apartment, have ethical values which direct their lives, makes each member of society objectively knowledgeable about other individuals.

At the same time, there are private realms of knowledge not known to all the participants in the common stock of knowledge. Each individual knows things about himself that are not shared and each division of labor creates a realm of knowledge about itself which is not shared by outsiders. These realms of an individual's knowledge are depicted in Figure 1.

FIGURE 1
KNOWLEDGE REALMS OF AN INDIVIDUAL



The psychological approach to communication problems, taken by Waltzlawick, Beavin, and Jackson (1967) in the Pragmatics of Human Communication, describes how communication can be and frequently is subverted, either

accidentially (sub-consciously) or purposely. They indicate what types of communication errors develop from inappropriate communication techniques. One in particular, the "double bind," appears to be relevant. They indicate that communication has both a content and a relationship, that is, the message contains substantive meaning, and there is a second message within it which tells the receiver of the message how to interpret the meaning. In the "double-bind" a message is sent which has contradictory elements in it. The substantive meaning and the way of interpreting it are not congruent.

Communication which has this paradoxical or double bind quality to it occurs when persons have a relationship with a high degree of physical or psychological "survival value" for the participants. Messages are sent which assert something in content, and something else which contradicts the content assertation. The receiver is prevented from acknowledging the contradiction, and therefore is forced into inappropriate responses.

When paradoxical communication occurs, the responses tend to be one of three types: a) the receiver "takes the blame" for not "understanding" and searches for clues to the meaning, without admitting the message doesn't make sense, b) the receiver complies with the instructions, however absurd, while admitting to himself that the message is absurd, or c) the receiver withdraws from involvement in the communication.

Since the parents were instructed to accept the content messages of the goal statements as both meaningful and understandable by them, they may have reacted to them by either trying to make the goal statements "make sense" and/or reacted to the goals statements as instructed even though they thought the statements did not "make sense." If they reacted in this

way the data would be seriously distorted, which could lead to misinformation being supplied to the educational decision makers (principals) about what goals the parents wanted their children to achieve.

Basic Theoretical Assumptions

Assumptions were identified from the two theoretical approaches to communication which might assist the KIT developers in the analysis of the communication problems encountered by parents:

1. Knowledge is always knowledge in relation to a certain position.
2. Knowledge is communicated through language.
3. All people share certain "common" knowledge.
4. All people do not have access to the total universe of available knowledge.
5. Knowledge, being held differentially, causes the development of divisions of labor among the various holders of knowledge, which creates sub-universes of knowledge and language to discuss those sub-universes. ("Education" is such a sub-universe.)
6. Different social groups vary greatly in their capacity to transcend their own narrow position in relation to the common stock of knowledge.
7. Communication has meaning at a content level and at a relationship level.

To be understood, the language chosen to describe an idea must have similar meanings for both parties, the speaker and the listener. It is necessary that agreed-upon meanings exist. If they do not, they must be created socially, between the participants in the communication. Until challenged by either participants or outsiders, it is assumed that understanding takes place. If understanding is absent the participants must "step outside the situation" and say "I do not understand (the communication)" or the communication takes on an inaccurate or inappropriate meaning.

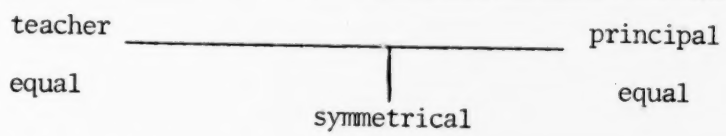
Inappropriate communication may result in the "double bind," occurring when the participants feel they must act upon communication which is incomprehensible, but from which they cannot retreat (step outside the situation to say they don't understand).

Watzlawick, et al., (1967) further suggest that the relationship between communicators affects the way the messages are interpreted and the responses. They suggest that "all communicational interchanges are either symmetrical or complementary, depending on whether they are based on equality or difference [p. 69]." Symmetrical communication occurs between and among equals and complementary communication occurs when when one is assertive and the other, submissive, with a maximization of difference.

In complementary interactions, two roles are acted out: one is superior, primary, or "one-up," and the other is inferior, or has a secondary cultural context. Examples of complementary interactions are those between mother and child, doctor and patient, teacher and student, etc. These are interlocked into behavior patterns that are socially defined as appropriate. The professional educator holds such a position with regard to students, and often appears to hold it with regard to parents as well. Parent-educator interactions can be seen to be both symmetrical and complementary as the situation changes. Figures 2 and 3 depict the two types of interactions.

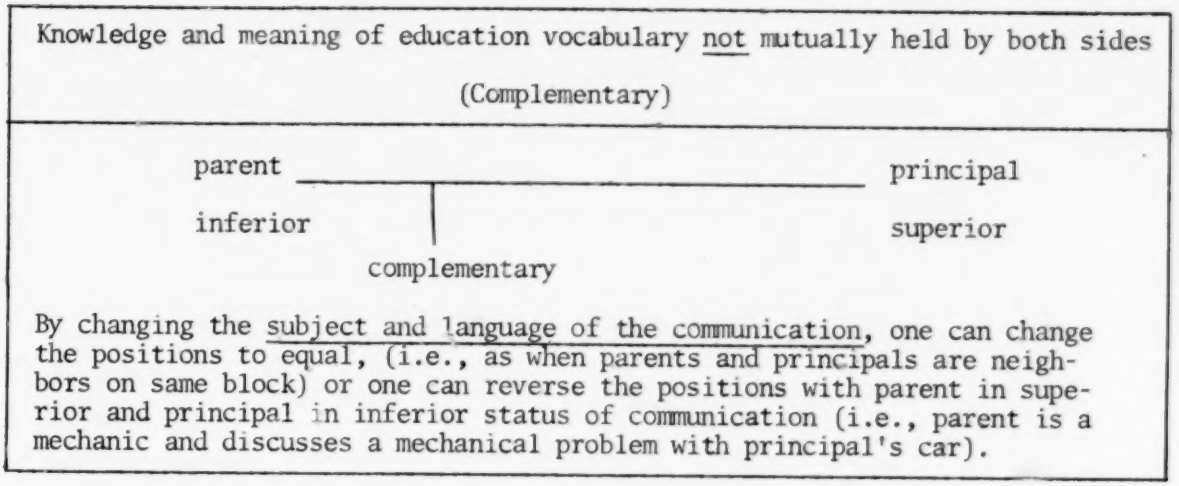
FIGURE 2
A SYMMETRICAL COMMUNICATION INTERCHANGE

Knowledge and meaning of vocabulary of education mutually held by both sides (Symmetry)



By changing the subject and/or language of communication one can change positions or roles to one being superior and the other inferior (i.e., when principals discusses the competence of the teacher, he then holds superior position).

FIGURE 3
A COMPLEMENTARY COMMUNICATION INTERCHANGE


Knowledge and meaning of education vocabulary not mutually held by both sides
(Complementary)
parent
principal
inferior
superior
complementary
By changing the subject and language of the communication, one can change the positions to equal, (i.e., as when parents and principals are neighbors on same block) or one can reverse the positions with parent in superior and principal in inferior status of communication (i.e., parent is a mechanic and discusses a mechanical problem with principal's car).

The status of the participants is always related to both the content and situation in which the communication takes place. The parents in the Collective Viewpoints study were asked to behave in a symmetrical way as equals, but apparently were unable to meet that challenge because the vocabulary was from the subuniverse of knowledge of educators rather than the vocabulary used by parents. In order for them to respond as equals in the decision making process, they must be addressed in language mutually understood by both parents and educators.

The Study Design

This study attempted to identify the degrees of comprehensibility by non-members of the sub-universe of the language used on the goal cards, and to then rewrite the cards to make them comprehensible by using the language of the "common stock of knowledge." The hypothesis developed from the basic assumptions outlined above is:

> The degree of comprehensibility of the vocabulary of the goal statements is in relation to the degree of participation of the lay person in the "common stock" of knowledge and to "sub-universe" of knowledge about education.

1) People at the lowest end of the socioeconomic system will understand less of the language than those higher on the socioeconomic ladder.

2) In certain instances, there may be no understanding by any level of non-members of the sub-universe of education, if the language is not translated into "lay terms" (terms mutually agreed upon in the "common stock of knowledge").

The study was set up in three phases:

During Phase I, a sample of parents (selected based on presumed varying participation in the common stock of knowledge) was asked to identify the vocabulary in the goal statements not understood by them. The data was then analyzed in relation to the theoretical base.

In Phase II, in light of the findings from Phase I, the goal statements were rewritten. If possible, every word and phrase identified by the participants was to be changed into more familiar or common language.

Phase III involved the field testing of the rewritten goal statements. The participants who had worked on Phase I were asked to respond to the new goal statements and identify any vocabulary still not understood.

PHASE I

Selection of Sample

Certain assumptions were made in planning the study which directed the type and number of people who were selected:

1. That parents in different socioeconomic levels of society would understand the vocabulary somewhat in relation to their position on the socioeconomic scale.

2. That a small theoretical sample taken from each of three categories of the socioeconomical levels (loosely defined as low, working, and middle class) would provide critical data about the range of difficulty encountered with the language of the goal statements.

3. That upon receipt of such data, most of the goal statements could be rewritten into language which could be understood by parents at any socioeconomic level.

4. That people tend to be self-conscious about admitting they do not understand something and that therefore the sample group would be more truthful if they were paid to tell what they did not understand and were made to feel less self-conscious through development of a casual and symmetric communication exchange.

A sample of people was chosen in terms of its probable vocabulary comprehension. It was assumed, based on sociological data about class and the structure of the society, that there would be considerable difference in the comprehension of the goal cards, by white middle class suburban parents who had probably finished high school and possibly attended college; by Mexican-American working class parents who are bilingual and who may or may not have completed high school in the U.S.A.; and by black low socioeconomic or unemployed parents who may or may not have completed high school. There was debate about selecting a fourth group of white working class parents, but it was assumed that they would be close to the working class Mexican-American and the blacks. We therefore chose to involve a) white suburban mothers, b) Mexican-American bilingual working-class mothers, and c) black low socioeconomic or unemployed black mothers.

All the parents came from different communities within the city of Los Angeles. Group One consisted of white parents who were chosen from a college suburb near the edge of the city. One had completed high school; one had completed college. They are both active in their local elementary schools.

Group Two was selected from a working class suburb in which there is an integrated population of blacks, whites, and Mexican-Americans (some of whom are also on public assistance). The group was composed of five people, four Mexican-Americans and one Anglo. Of the Mexican-Americans, two were tutors in the school, one was a volunteer (as was the Anglo), and one had very recently moved to the U.S.A. (She had had some college in Mexico but spoke English very haltingly.) The Anglo did not speak Spanish, and had completed

high school, as had two of the Mexican-Americans. All the Mexican-Americans spoke both Spanish and English. They frequently lapsed into Spanish when talking to each other about the goal cards. One took responsibility for interpreting the cards to the woman recently from Mexico. None of the mothers worked outside the home. They regularly took part in school activities.

Group Three consisted of six black parents chosen from a section in the central city with a high incidence of the population on public welfare. None of them worked outside the home. They all took part in school activities as teachers' aides or as volunteers in some other capacity with the school. Some of them had worked in the past in such occupations as aides in a county hospital and domestic helpers. Three had completed high school; the other three had not.

The fact that all the mothers in the study participated in school activities as aides, etc., indicated a certain level of sophistication and assumption of social responsibility. From this it might be assumed they would understand more of the vocabulary than other parents from their same social strata, simple because of continuous exposure at school. There was no comparison group of non-participating (in school activity) mothers. The findings indicate, however, that within two of the groups there was a very wide differential in the range of comprehension, as well as a wide variation among groups.

Theoretical Assumptions About the Sample

The white suburban parents (Group 1) were chosen to provide a base line on the range of difference between the professional educator's and the "average" parents' use and comprehension of the language in the goal statements. It had been assumed at the Center that most parents could understand

the goals. Since the field test indicated that many had trouble, the responses of the white suburban parents could offer a thumbnail guide to the variance between comprehension by "average" parents and the perceptions of the professional educators who had written the goal statements for "average" parents. This then would indicate the level of participation by this group of parents, both in the common stock of knowledge and the sub-universe of knowledge about education.

The Mexican-American parents (Group 2) were chosen to provide insight into the type of vocabulary difficulties that might be encountered by bilingual parents. It was assumed that the vocabulary of the bilingual working class group would be less extensive than the white middle class. If that assumption held up, the data would indicate the distance between Group 1 and Group 2 in participation in the common stock of knowledge, and in the sub-universe of knowledge about education.

The black parents (Group 3) from the central city were chosen as theoretically representative of the lowest level of participation in the common stock of knowledge and the absence of participation in the sub-universe of knowledge about education. It was assumed that due to the educational deficits experienced by blacks adults nationally, their participation in the study would provide data on the extent of difficulty such parents as a group would encounter with the goal statements.

Elementary school principals were contacted and asked for their cooperation in the research. They were each told:

> "We are conducting research and development of an Elementary School Evaluation KIT which includes a method for doing a Needs Assessment for the school. The KIT recommends that parents be involved in the Needs Assessment by participating in a procedure for identifying and ranking the goals for children. The procedure involves sorting into five ranked stacks 106 cards on which are printed educational goals for children. The Center has taken the card sort procedure

> into the field and tested it nationally with 200 schools. There was considerable comment on the difficulty parents had with the vocabulary. The data, however, did not reveal the specific difficulty the parents experienced. We are therefore recruiting parents to participate in a very small applied study to identify the words and phrases they do not understand. We are interested in parents whom you think represent the educational level of your school. We are asking for neither the most capable nor the least capable, just the "run of the mill" type parents in your school. You are free to recruit whomever you wish. They will be paid $10.00 a session to contribute their time. The Center will acknowledge their time with a letter of appreciation and the check. We will need one morning or one afternoon of their time and are willing to meet two times if necessary."

Methodology

The Group 1 parents and the researcher met at the home of one of the participants. The Group 2 and Group 3 parents met with the researcher at their respective schools. A session of about two hours duration was held with each of the three groups. The researcher met with one black parent a second session.

The parents were each given a set of the 106 cards. They were asked to read them and to circle any words not understood and to underline phrases they did not understand. The following explanation and instructions were given to the participants:

> "These cards have been designed to assist parents and teachers to identify the goals they consider most important, by reading the cards and sorting them into five stacks, from Most Important to Least Important. We have tested the cards in 200 schools across the country, and found that most teachers understood them very well and could do the sorting without much difficulty. The parents, however, had quite a bit of difficulty with the vocabulary. We are now trying to find out specifically which words caused the most trouble. We plan to rewrite the cards after this research is completed, based upon the information which all of you will contribute. We are aware that some of the vocabulary is frequently used by educators, and less frequently, if at all, by parents.
>
> We are asking you to circle the words you do not understand and to underline the phrases you do not understand (even if you understand the words in the phrases). You may ask me questions, if necessary. You may also make comments on the back of the cards, as you feel necessary."

Results: Phase I

The words and phrases identified as not understandable were tallied for each participant and then for each group. As predicted, the results indicated that the vocabulary was progressively more difficult moving from Group 1 (white) to Group 3 (black). Over all, the results indicated that Group 1 and Group 2 (Mexican-American) clustered closer to one another, than either did to Group 3.

Since there were only two participants in Group 1, that data is not as fully comparable to Group 2, but it is assumed there would not have been an appreciable change in the results of those two groups. Group 3, however, clearly showed that they were indeed handicapped in their ability to understand the vocabulary of the goal statements. Group 1 (2 participants) identified 104 words and phrases (52 each) which they did not understand. Group 2 (5 participants) identified 302 words and phrases (an average of 60 each, ranging from 53 to 81 items per person). Group 3 (6 participants) identified 859 words and phrases (an average of 143 each, ranging from 74 to 232 per person). The results of the Phase 1 tallying are shown in Figure 4.

FIGURE 4
PHASE 1: NUMBER OF ITEMS FROM ORIGINAL GOALS
NOT UNDERSTANDABLE BY EACH GROUP

Group No.	No. of Participants	Total No. of Items	Average Per Person	Range
1	2	104	52	52 - 52
2	5	302	60	53 - 81
3	6	859	143	74 - 232
Total	13	1265	97	52 - 232

From the 106 goal statements, these thirteen mothers offered a total of 1265 comments about words and phrases they did not understand in the goal statements. We had anticipated that the findings would indicate a regression of understanding as the socioeconomic level regressed. As can be seen, the middle class and the working class mothers combined had only half as much difficulty as the lowest group. We had expected a wider range of difference between the first two groups, with a more or less even division between each of the three groups.

Discussion

The results show an overall progression of difficulty with the vocabulary from the mothers in Group 1 to the mothers in Group 3. There were some items which were equally difficult for all mothers, and most of those items were from the stock of knowledge in the sub-universe of professional educators to which very few lay people have access. When the language of the cards was a part of the stock of knowledge held by lay people, the comprehension level went up for all three groups.

However, there were still progressions of difficulty even within the so-called common stock of knowledge. Group 1 was able to comprehend much more of the common language than the parents in Group 3. It appears that the common stock of knowledge is most universally comprehended in the area of non-educational language (e.g., happy in school). The following 5 goal statements give examples of the range of responses.

3A SCHOOL ORIENTATION

Has a favorable attitude toward school, teachers, studying.

All three groups of parents appear to have these words and concepts in common. None identified any part of this goal statement as not being understood. It is assumed that all thought they understood the goal statement.

1B NEUROTICISM-ADJUSTMENT

Faces reality. Is well adjusted. Is generally happy.

Group 1 did not underline any words in the goal statement. Most of Group 2 and 3 underlined "neuroticism." It is assumed they thought they understood the rest of the statement.

2C SOCIALIZATION-REBELLIOUSNESS

Has a healthy balance between conformity, acceptance, obedience, rigidity, and non-conformity, criticism, and disrespect. Is open-minded and tolerant to new ideas, non-conformity in others. Respects public and private property, shares, cooperates, is respectful, and courteous.

This goal statement represents a differential sharing of the common stock of knowledge. Group 1 indicated no difficulty in understanding any of it, although they suggested that the first sentence could be rephrased to more clearly delineate the contrasts. Group 2 did not have any trouble with the body of the statement, but they underlined "rebelliousness" in the title. Group 3 had a great deal of difficulty with the entire statement underlining: "rebelliousness, conformity, acceptance, obedience, rigidity, non-conformity, criticism, disrespect, open-minded, tolerant to new ideas." We are unable to discern from the data whether Group 3 did not understand the words, or understood some or all of the words but not the context. It is highly unlikely that they could meaningfully rate the goal under either circumstance.

8D SPATIAL REASONING

Has speed, acuity, and accuracy of visual perceptions. Visualizes what a thing would look like if changed in certain ways. Has good orientation.

This goal statement represents an example of 100% exclusion from the knowledge. All the participants underlined Spatial, acuity and good orientation. This probably represents their shared exclusion from some of the

body of the knowledge held by educators in that none of them knew what the words meant, and therefore would not be in a position to judge whether the goal is of importance.

15D COMPREHENSION OF NUMBER PRINCIPLES

Understands commutative, associative, and distributive properties, closure, identities, properties of 0 and 1, and inverse operations.

Like 8D, 15D represents a sub-universe of knowledge unknown to all of the participants. They all said that the statement was incomprehensible to them. Needless to say, a paradox is clearly represented in these cases. When the parents in the earlier field test were asked to sort this goal statement from most to least important, they were given no option to put the card in a do not understand category; so, without understanding anything in the statements, it was "rated" along with all the others, thus providing potentially false information to principals.

PHASE II

Revision of the Goals Based on Implications of the Pilot Study

Examination of the results of the pilot study, clearly indicated that the goals would have to be rewritten. In order for parents from every walk of life to be able to use them, the language would have to be from the stock of knowledge held in common by them. Due to some practical difficulties relating to other uses for the goal statements, it was decided to leave the titles as originally written, but to rewrite the body of the statement, and to add a sub-title where necessary to the original which would interpret it to the reader.

The goal statements were coded to show every comment made by every parent indicating the words and phrases which one or more parents did not understand. Some statements showed only a word or two. Others ended up appearing to be

totally incomprehensible due to the number of words not understood. In some instances, the parents had stated "The whole card needs to be rewritten." They did not underline specific words in such instances.

The set of goal statements was divided into three groups and given to three members of the Center staff who then rewrote the group of goals assigned to them. They then passed the newly rewritten material on to the next person. If the second writer felt the vocabulary of the first rewrite was still difficult, a second alternative was presented along with the first writers' changes. A third writer then read both revisions, and if in disagreement added a third alternative.

The original vocabulary of the goal statements contained many single words standing for concepts representing whole sections of the field of education, both in the area of cognitive curriculum content, and in the area of affective psycho-social development of the child. The review team felt that primary difficulty with the vocabulary arose from the use of such "intellectual shorthand" from the sub-universes of knowledge. Rather than use a single word which conceptually communicates an array of sub-topics, the goal statements would have to be written in language describing the components of the concepts, even at the risk of over-simplifying the goal.

For example, a phrase such as "synthesizing known information," would become "putting all the information together for systematic testing." In another instance, the phrases "self-concepts, self-confidence, self-security and self-esteem" would become "healthy idea of self, trusts own judgment; not afraid to make decisions....usually likes the kind of person he is...." In this way, the statements in the entire set of goals were translated into statements describing the content of the concepts.

After all 106 statements had been through the process, the three writers met together, reviewed the alternatives, and finally selected what seemed to all three to be the simplest, most understandable statement. This process was done with a great deal of reliance upon intuition and assumptions held by the writers about the vocabulary of the common stock of knowledge held by the sample groups.

Certain difficulties arose in the process of rewriting the statements involving "new math." It was felt by each of the writers that "new math" is not concisely translatable into language of the common stock of knowledge. It was agreed that the language of "new math" belongs to a sub-universe of knowledge and has no simple common equivalent in the common stock. The "new math" statements were modified to whatever extent possible with descriptive clauses in parentheses. However, the staff felt that even after being rewritten, the parents would still have trouble with the "new math" vocabulary. The second field test of the study substantiated that prediction.

An additional change was also made for the field test. The original goal statements had been printed on cards and were designed for use as a Q-sort. The participants sorted the goals into stacks, from Most Important to Least Important. The new goal statements were printed in questionnaire form with instructions to circle the rank of importance from 5 to 1 (Most Important to Least Important).

PHASE III

Field Test of Rewritten Goal Statements

The field test was conducted with the same 13 participants who had identified the vocabulary difficulty on the original goal statements. They were again paid $10.00 each. They were asked to do three tasks in this test.

First, they were instructed to circle and underline words and phrases still not understandable to them in the new statements. Second, they were instructed to complete the questionnaire by rating each goal statement from Most to Least Important. Third, they were asked to indicate their preferences for the cards or the questionnaires. (This information appears as Appendix A.) The questionnaires were mailed to each participant with a request to return them within a week. They were all returned within 2½ weeks.

Results of Field Test of Rewritten Goal Statements

The participants identified 58 words or phrases as still not understood in the new goal statements, in contrast to a total of 1,265 in the initial identification task. Of these 58, 17 were words in the titles which had not been rewritten. The original data identified 41 words or phrases in the titles. Therefore, to be fully consistent they should have identified an additional 24 words in the titles. (Figure 5 summarizes the results obtained from the second session.)

FIGURE 5
PHASE III: NUMBER OF ITEMS FROM REVISED GOALS
NOT UNDERSTANDABLE BY EACH GROUP

Group No.	No. of Participants	Total No. of Items	Average Per Person	Number Related towards intitles
1	2	13	6.5	-0-
2	5	10	2	3
3	6	35	6	14
Total	13	58	4.5	17

In looking at the entire group of 106 statements which were rewritten, 27 statements ellicited new comments. Of those 27 statements, 17 ellicited comments related to the titles only. Of the remaining 10 statements which were still causing some sort of difficulty, 3 were statements regarding modern math goals. As predicted, the modern math goals were the most difficult to write into language from the common stock of knowledge.

There was consistency in the words which were underlined and the theoretical position taken in this paper. The statements about mathematics still turned up as unintelligible to most of the participants, which indicates that they cannot communicate their desires for their children's education regarding the CONTENTS of Modern Math, even though they may feel that TO KNOW Modern Math is a necessary skill or goal for their children in today's society.

There was also consistency in the vocabulary underlined when it reflected specific areas of sub-universes of knowledge. For example, they again underlined "syllogism, metaphors, hypothesis, analogies, glossaries," which are all words belonging to sub-categories of knowledge.

In the titles, which had not been rewritten they again underlined such words as "Integers, Spatial, Ideational, Classificatory, Operational Definitions, Representational Skills." These words also belong to sub-universes of knowledge. However, when the text was rewritten into language from the common stock of knowledge held by the group, they indicated that they understood the words of the text, even though they still did not know the words in the titles.

In order to demonstrate the resolution of particular types of difficulty encountered by participants with the original goal statements, some comparisons between the rewritten and original are presented.

The goal statement 35D "Hypothesis Formation in Science" presents a good example. The original statement read:

35D HYPOTHESIS FORMATION IN SCIENCE

Makes reasonable predictions from known information, observation, and/or experimentation. Formulates simple hypotheses by analyzing and synthesizing known information, observation, and relevant experiments. Changes hypotheses in the light of new evidence. Thinks in terms of the possible explanations for what is observed; sees the relationship between cause and effect.

Group 1 and 2 had the same type of difficulty. They underlined "hypothesis" and "synthesizing known information." Group 3 underlined "hypothesis; experimentation; formulates simple hypothesis by analyzing and synthesizing known information; observation, relevant experiments; relationships between cause and effect," indicating almost total lack of comprehension for them.

Group 1 and 2 were able to understand most of the language from the sub-universe of knowledge about science indicating that their common stock of knowledge was large enough to accomodate most of the vocabulary. Group 3, however, was unable to comprehend enough of the language to make reasonable judgments about the value of such a goal for their children. The material for the same goal statement was rewritten to read:

35D HYPOTHESIS FORMATION IN SCIENCE

Makes reasonable predictions from known information, observations, and experiments. Develops simple ideas into testable terms, by studying all aspects of the idea and then putting all the information together for systematic testing of the idea. Changes ideas in the light of new evidence. Thinks in terms of possible explanations for what is observed. Can identify causes of outcomes.

The rewritten goal statement did not receive comments from any of the three groups. To be totally consistent one or more from <u>each</u> group should have underlined "Hypothesis" in the title. However, none of them did so, perhaps indicating that the parents were satisfied with the text and were confident that the text defined the title.

The next examples shows Group 1 having the least difficulty and Groups 2 and 3 having almost identical difficulty.

30A RECOGNITION OF WORD MEANINGS

Has broad vocabulary. Recognizes word meanings through context. Recognizes word meanings through analysis of prefixes, suffices, roots, and word origins. Recognizes synonyms, antonyms, and homonyms. Recognizes denotations and connotations of words.

Group 1 identified "homonyms; denotations; connotations." Both Groups 2 and 3 identified "context; suffixes; synonyms; antonyms; homonyms; denotations; connotations of words," with Group 3 also underlining "broad vocabulary."

Group 1 seemed to have the advantage in the language of grammar and word usage from their participation in that sub-universe of knowledge. Group 2, the bi-lingual mothers with only a moderate amount of education, and Group 3, with even greater educational disadvantages, found themselves unable to understand most of the goal statement and therefore would have little ability to make reasonable judgments about it for their children. The goal statement was rewritten to read:

30A RECOGNITION OF WORD MEANINGS

Has a good vocabulary. Recognizes the meanings of words by the way they are used. Recognizes words by looking at common beginnings and endings. Recognizes words that mean the same things, the opposite things, and words that sound alike but mean different things. Uses logic in trying to understand the meaning of words.

There were no difficulties identified by any participant with this rewritten goal statement.

The next examples shows the progressive difficulty encountered from Groups 1 through 3. The original goal statement was:

31C CRITICAL READING

Analyzes and evaluates reading selections. Recognizes author's points of view and purpose for writing. Analyzes and compares different points of view. Distinguishes one type of literature from another. Distinguishes fact from fiction. Recognizes persuasive devices, propaganda techniques, illogical thinking, discrepancies, and unstated assumptions. Distinguishes among fact, opinion, hypothesis, and value statements.

Group 1 had difficulty with only one word, "hypothesis." Group 2 had trouble with "discrepancies; unstated assumptions; hypothesis, value statements." They were then less able to make a judgment about the goal statement's worth. Group 3 had almost no knowledge with which to make a judgment, since they understood almost none of the statement. They identified "analyzes; author's points of view and purposes for writing; distinguishes; persuasive devices; propaganda; illogical thinking; discrepancies; unstated assumptions, hypothesis; value statements." The goal statement was rewritten to read:

31C CRITICAL READING

Recognizes intentions of author and purpose of the writing. Can decide on the basis of logic and judgment the quality of the writing. Can tell fact from fiction and one type of literature from another (fairy tales, true stories, etc.). Can recognize writing that encourages one point of view over any other or that does not make logical sense. Can tell the difference between fact, opinion, guesses, and statements of feelings.

The rewritten material received no comments from any participant in any group.

Each of the goal statements described above was originally written in language from educational sub-universes of knowledge, namely science, grammar, and reading. The participants in this study had differential access to those sub-universes, as indicated by the words they did not understand.

After these three statements were rewritten there were no words underlined by participants in any group. Although, as pointed out earlier, to be fully consistent they should have underlined the word "Hypothesis" in the title of 35D.

Comparison of top ten goals

From the national field test, a list of the top 10 goals was developed. In the first phase of this study, the same top 10 goals were analyzed to determine the level of comprehension of the participants.

Group 1 had difficulty with goal #1, identifying "self-esteem" and "self-concept" as words they did not understand. With goal #3 they suggested it be rephrased to make the contrasts more clear. They made no comments about the other eight goals.

Group 2 had difficulty with 6 of the ten goals. For #1, they underlined "self-esteem," #2 "supports free and honest communication," #3 "Rebelliousness" in the title, #4 "strives" and "spite," #5 no comment, #6 "Neuroticism" in the title, #7 no comment, #8 "to communication," #9 and #10 no comment.

Group 3 had so much difficulty their comments are reproduced below in their entirety. (Difficulties identified with underlines.)

Top Ten National Goals with Community Group 3 Difficulties

(Rating)

(1) 3B SELF ESTEEM

Has a healthy self-concept, self-confidence, self-security, and self-esteem.

(2) 41B CITIZENSHIP

Is concerned for the dignity, welfare, rights, and freedoms of every individual. Does not have prejudices. Accepts his role and responsibilities as group member. Supports free and honest communication. (Plus written comment - everyone has prejudices.)

(3) 2C SOCIALIZATION-REBELLIOUSNESS

Has a healthy balance between conformity, acceptance, obedience, rigidity, and non-conformity, criticism, and disrespect. Is open-minded and tolerant to new ideas, non-conformity in others. Respects public and private property, shares, cooperates, is respectful, and courteous.

(Rating)

(4) 4A NEED ACHIEVEMENT

Direct energy and thinking into productive channels. Desires to learn. Does his best. Is reasonably ambitious. Strives for excellence. Pursues goals in spite of frustrations.

(5) 3A SCHOOL ORIENTATION - No comments

Has a favorable attitude toward school, teachers, studying.

(6) 1B NEUROTICISM-ADJUSTMENT

Faces reality. Is well adjusted. Is generally happy.

(7) 27A LISTENING REACTION AND RESPONSE

Listens attentively to a speaker. Gains information through listening and remembers it. Follows the thoughts of others. Follows directions.

(8) 32A ATTITUDE TOWARD READING

Appreciates the importance of reading to communication and as a source of pleasure. Appreciates the creativity of literature and its importance to understanding man. Reads various types of literature in leisure time for recreation and personal fulfillment.

(9) 29B SILENT READING EFFICIENCY

Reads at a reasonable rate for age and grade level. Adjusts reading speed to material and purpose. Reads rapidly.

(10) 2A DEPENDENCE-INDEPENDENCE

Is self-sufficient and self-responsible. Does not have an excessive need for acceptance, approval, security.

After the goals were rewritten there was only one comment from one participant. One person from Group 2 underlined "the world as wished" in Goal 1B (rated #6). None of the other participants made any comments.

The rewritten national top ten goal statements:

(Rating)

(1) 3B SELF ESTEEM
(Self Respect)

Has a healthy idea of self. Trusts own judgment; is not afraid to made decisions or to be responsible for the results of own decisions. Usually likes the kind of person he is. Will admit to mistakes.

(2) 41B CITIZENSHIP

Protects and defends the honor, well-being, rights, and freedoms of every individual. Works to reduce prejudices in self. Accepts responsibility for own part in group activities. Attempts to keep free and honest exchange of ideas with others.

(3) 2C SOCIALIZATION-REBELLIOUSNESS
(Personal Conduct)

Accepts most rules and expectations. Knows when to do what is expected and when to make own judgments. Can accept criticism, but can tell when it is not fair. Is open to new ideas and suggestions. Respects other's rights (especially their right to be different). Respects public and private property. Shares, cooperates, is courteous, and polite.

(4) 4A NEED ACHIEVEMENT

Thinks about and works toward useful goals. Desires to learn. Tries to do best work. Tries to improve. Does not give up easily.

(5) 3A SCHOOL ORIENTATION
(Attitude toward School)

Has favorable attitude toward school, teachers, and studying.

(6) 1B NEUROTICISM-ADJUSTMENT
(Emotional Health)

Understands the difference between the real world and the world as wished. Plans, works, and plays, taking into account the difference between what is real and what is not. Is as happy and adjusted as life allows.

(7) 27A LISTENING REACTION AND RESPONSE

Listens carefully to speaker. Gains information through listening and remembers it. Understands what speaker is trying to say. Follows directions.

(Rating)

(8) 32A ATTITUDE TOWARD READING

Reads various types of literature in spare time for personal enjoyment. Reads newspapers and other sources of information. Seeks out certain types of materials to get specific information, and as an aid to study. Is able to change behavior, feelings, and opinions as a result of knowledge gained through reading.

(9) 29B SILENT READING EFFICIENCY

Selects reading speed to meet need (understanding as a whole, to remember all or part, or to remember specific facts in the material).

(10) 2A DEPENDENCE-INDEPENDENCE

Takes responsibility for self. Can help self and accept help when needed. Does not need too much approval, security, or protection. Can accept sharing time and attention with others.

Some Questions About Rating the Goals

In the national field test of the KIT, the top 10 goals represent the combined ratings of both professional educators (teachers and principals) and parents. Since the data from the field test indicated that parents had trouble with the vocabulary of the goal statements, a teasing question has been whether parents would have rated the goal statements differently had they understood the goals better.

This small study did not include having the participants rate the original goal statements before they identified the vocabulary difficulties. However, it did ask them to rate the goals after they had been rewritten. Although the results are statistically unusable for comparison with the national study, they do provide some provocative ideas which should be investigated by further research.

In the national field test, the first six goals all related to personal rather than intellectual development. Only 3 (#7, #8 and #9) of the top 10 goals nationally were cognitive; those three related to reading. The other

7 were all affective goals relating to attitudes towards self and others and to behavior. In this study, the top 10 goals rated by the 13 participants were considerably different, with the first 3 goals all relating to cognitive development in reading, the next 5 relating to personal or effective development, and the last 2 related again to cognitive development.

Rewritten Top Ten Goals of this Field Study

(Rating)

(1) 32A ATTITUDE TOWARD READING

Reads various types of literature in spare time for personal enjoyment. Reads to improve understanding of mankind. Enjoys the various ways in which literature presents ideas (poetry, fiction, etc.). Understands the help reading offers in improving vocabulary, speaking, and writing abilities. Likes to read.

(2) 29A ORAL READING

Reads aloud with correct feeling and meaning. Reads clearly and smoothly. Uses expression in reading aloud. Reads words correctly. Understands what is being read.

(3) 28A PHONETIC RECOGNITION

Can identify the sounds of letters (phonetics). Can sound-out words when sound corresponds to spelling. Uses the sounding-out of letters and words (phonics) as a reading tool.

(4) 41B CITIZENSHIP

Protects and defends the honor, well-being, rights and freedoms of every individual. Works to reduce prejudices in self. Accepts responsibility for own part in group activities. Attempts to keep free and honest exchange of ideas with others.

(5) 2C SOCIALIZATION-REBELLIOUSNESS
(Personal Conduct)

Accepts most rules and expectations. Knows when to do what is expected and when to make own judgments. Can accept criticism, but can tell when it is not fair. Is open to new ideas and suggestions. Respects other's rights (especially their right to be different). Respects public and private property. Shares, cooperates, is courteous, and polite.

(6) 25A GROUP ACTIVITY-SPORTSMANSHIP

Is a good winner and a good loser. Can be a leader or a follower. Obeys the rules of the game. Feels very involved in the sport. Has team spirit.

(7) 2B HOSTILITY-FRIENDLINESS

Is friendly, generous, helpful, good-natured, and interested in people. Avoids starting quarrels and fights; does not remain angry for a long time, and does not hold a grudge.

(8) 23A PRACTICING HEALTH AND SAFETY PRINCIPLES

Aoolies health and safety principles to daily life. Develops good habits of cleanliness. Gets enough rest, sleep, and physical exercise. Wears proper clothing for the weather and activity. Practices common sense safety and obeys traffic and safety rules. Develops good eating habits.

(9) 27A LISTENING REACTION AND RESPONSE

Listens carefully to speaker. Gains information through listening and remembers it. Understands what speaker is trying to say. Follows directions.

(10) 13C CAPITALIZATION

Knows which words to capitalize and does so in written work.

Some possible influences for the shift in rating, discounting the problems caused by the sampling of the parents for this study, are:

Did the fact that these participants had so much trouble with the vocabulary on the original goal statements influence their choices to emphasize reading skills so heavily?

Would they have rated the old goal statements the same way?

Did the original national field test participants select as most important, the goals they understood?

Do people from bilingual or low socioeconomic groups (Groups 2 and 3 in this study) emphasize reading more than professionals or middle class parents?

In examining the data from this study, the participants did not introduce a math goal till #20, and then chose a "Modern Math" goal.

#20 15B COMPREHENSION OF NUMBERS AND SETS IN MATHEMATICS (Modern Math)

Understands numbers and number concepts (odd and even numbers, prime and composite numbers, factors and factoring, number multiples, etc.). Understands how numerals are assigned to groups of things (set notation, wet membership, operations with sets, etc.).

The question still remains unanswered as to why they rated this modern math goal when they indicated they still did not understand the other modern math goals any better the second time than the first. It is that they feel modern math is important to know, even though they do not understant it themselves? If so, why didn't they also select the other modern math goals?

In the national field test, the only math goals ranked were #12 and #19.

#12 16A OPERATIONS WITH INTEGERS

Adds, subtracts, multiplies, and divides whole numbers; checks answers.

#19 17A MATHEMATICS PROBLEM SOLVING

Uses mathematical knowledge and skills (arithmetic, measurement, and geometry) to solve common practical problems.

These are rather simple math goals, the national sample ranked no modern math goals in the top 20 at all.

SUMMARY

This study was conducted to identify the language difficulties encountered by parents in working with 106 goal statements for elementary education. A sample of 13 parents from middle to low socioeconomic classes identified 1265 words and phrases they did not understand. After the goals were rewritten, they identified only 58 words and phrases as not understandable.

Based on the theory that communication only takes place when communicators are speaking from a mutually held stock of knowledge, the newly rewritten statements are more understandable than the original statements.

Based on the theory of pragmatic communication creating double-binds if the message does not convey logical, meaningful ideas and methods of interpreting them, the parents are still in a double-bind position regarding such goals as modern math and cannot communicate appropriately their desires for their children.

Should principals act upon the rating of such goals by parents, the school programs may not reflect the true goals desired by parents. If parents are to participate in goal-sorting procedures, they need a way of indicating what they do not understand, and an opportunity for further clarification prior to rating the goals.

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APPENDIX A

Participants Reaction to Questionnaire

The participants were given the rewritten goal statements in a questionnaire form rather than on cards in a Q-sort. They were sent a cover letter requesting them to answer four questions comparing the use of the questionnaire to the cards. They were instructed to return the cover letter and the questions on it along with the completed questionnaire.

The four questions and the 13 participants' responses are reproduced below:

1. Were the instructions clear on the questionnaire?

   Yes 13 No 0

2. Was the questionnaire easier to understand than the blue cards?

   Yes 11 No 1 No answer 1

3. If the newly rewritten material were put on goal cards, which would you prefer to work with?

   Cards 3 Questionnaire 8 No answer 2

4. Do you have any comments about the questionnaire or the cards?

   a) Questionnaire is better because it can be done at home.

   b) Parents should have little or no trouble understanding new goal statements.

   c) The Modern Math goals are still not clear. Could terms like "transitive properties" and "composite numbers" be explained further"

   d) Some goals relate to inate ability and not to acquired skills or knowledge learned at school. (No example given)

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